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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/603,644

06/25/2003

James D. Burrington

3215

2753

7590 12/10/2007
THE LUBRIZOL CORPORATION
Patent Administrator - Mail Dorp 022B
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EXAMINER

MCAVOY, ELLEN M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

12/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/603,644

Applicant(s)

BURRINGTON ET AL.

Examiner

Ellen M. McAvoy

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission, amendments to the claims and additional arguments, filed on 03 October 2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5-20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higton et al (6,310,010).

Applicants' arguments filed 03 October 2007 have been fully considered but they are not persuasive. As previously set forth, Higton et al ["Higton"] discloses concentrates for lubricating oil compositions which are prepared by mixing at elevated temperatures (i) at least one high molecular weight ashless dispersant; (ii) at least one oil soluble overbased metal detergent; and (iii) at least one surface-active agent comprising a low molecular weight hydroxyl or amine group. Higton teaches that while it is convenient to provide "additive packages" wherein the concentrations of the additives are much higher than in formulated lubricating oil

compositions, some of the additives such as overbased metal detergents and high molecular weight dispersants tend to interact with each other at such high concentrations, and that in some instances, the interaction results in gelation. See column 1, lines 30-48. While not wishing to be bound by theory, Higton believes that the dispersant/detergent complex causes an increase in viscosity because the lipophilic groups of the ashless dispersant of one complex can interact with the lipophilic groups of another complex. Higton teaches that the viscosity may rise uncontrollably to the extent that gels may form which is referred to as the Weissenberg Effect. See column 2, lines 30-43. Suitable ashless dispersants include polyisobutylene succinimides and Mannich base condensates. See column 5, line 62 to column 11, line 22. Suitable detergents include oil-soluble overbased sulfonates, phenates, sulfurized phenates, and salicylates of alkali or alkaline earth metals. See column 11, lines 23-56. Higton also allows for the addition of other additives to the concentrate such as antioxidants, anti-wear agents and viscosity modifiers. See column 5, lines 8-17. The examiner maintains the position that Higton meets the limitations of the composition of the claims when the dispersant/detergent/antioxidant combination in the additive package forms a gel. Example 1 in column 17 sets forth a blend of an ethylene-butene copolymer substituted dispersant and an overbased detergent containing magnesium sulfonate with a TBN of 400. The Weissenberg Effect (gelling) occurred in several additive packages as shown in Table 1. Although reducing emissions is not taught, Higton teaches that the gels are suitable for use as lubricants in gasoline and diesel engines and the property of reducing emissions (with the addition of the dispersant/detergent/antioxidant) is seen to be inherent.

Applicants argue that they amended claims 1, 11 and 22 to require the weight ratio of component A to component B (A:B) to be from about 1:4 to about 1:2 and that, in contrast, the

disclosure in Higton is limited to weight ratios of dispersant to detergent of about 8:1 to 1:1.

Applicants argue that the reference does not disclose, suggest or teach the ratios required by the claimed invention, therefore the 103(a) rejections based on Higton should be removed. This is not deemed to be persuasive because Higton also discloses that the dispersant component, component A, may be present in the concentrate in an amount from 3 to 50 mass % and that the metal detergent component, component B, may be present in the concentrate in an amount from 3 to 45 mass % which is broad enough to meet the limitation of the claimed weight ratio of component A to component B. Further, a weight ratio of dispersant to detergent of about 0.1:1 to 12:1 is also set forth in Higton. See column 5, lines 33-44.

Applicants argue that even if Higton discloses some gel compositions, the reference does not disclose, suggest or teach any use of such compositions other than use as concentrates of lubricating oil compositions, where such compositions are used to blend final lubricating compositions. Applicants argue that there is nothing in the reference to suggest that gel compositions could provide a controlled release of one or more additives to an operating engine lubricating system and that such release could be modified and controlled by the formulation of the gel compositions and that such gel compositions could be used to decrease emissions. This is not deemed to be persuasive because the claims are drawn towards compositions comprising conventional lubricant additives and towards processes of using the compositions as engine oils. The examiner maintains the position that it would have been obvious to the skilled artisan to have added more diluent or lubricating oil to the gels disclosed in the prior art to dilute them and to dissipate the gel into a lubricating oil containing the conventional lubricant additives. Thus it would have been obvious to the skilled artisan to have contacted the lubricating additive gel with

a lubricating fluid and expect the gel to slowly release the lubricant additive components into the fluid. The examiner maintains the position that it would have been obvious to the skilled artisan to have placed the gel into a device as set forth in claims 23-24 which would allow the gel to slowly dissipate into a fluid such as a lubricating oil.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451.

The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

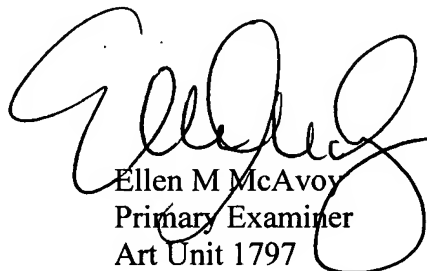
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the
automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M McAvoy
Primary Examiner
Art Unit 1797

EMcAvoy
November 30, 2007